IN THE CLAIMS:

1. (Original) A spacerless or geocomposite double bottom apparatus for a storage tank having a metal bottom and upwardly extending metal sidewalls, which apparatus comprises:

a first lining layer of flexible plastic on top of said metal bottom;

a plastic grid having a plurality of openings therethrough on top of said first lining layer;

at least one layer of fiber insulation on top of said grid; and

an upper metal bottom on top of said fiber material welded to said sidewalls.

2. (Original) A double bottom apparatus as set forth in Claim 1 wherein said first lining layer is a high density polyethylene sheet.

3. (Original) A double bottom apparatus as set forth in Claim 1 wherein said plastic grid is composed of high density polyethylene.

4. (Original) A double bottom apparatus as set forth in Claim 1 wherein said fiber insulation is mechanically bonded mineral or glass wool.

5. (Original) A double bottom apparatus as set forth in Claim 4 including two layers of said mechanically bonded mineral or glass wool.

6. (Original) A double bottom apparatus as set forth in Claim 1 wherein said upper bottom extends through slots in said sidewalls and is welded thereto by welding to a flat bar extending from said sidewalls.

7. (Original) A double bottom apparatus as set forth in Claim 6 wherein all welds are made from above said upper bottom.

8. (Original) A double bottom apparatus as set forth in Claim 1 including a leak detection port through said sidewalls between said original bottom and said upper bottom.

9. (Original) A double bottom apparatus as set forth in Claim 7 wherein said leak detection port includes a clear cylindrical tube so that fluid therein is visible.

10. (Original) A double bottom apparatus as set forth in Claim 1 wherein a fluid tight containment space is created between said upper bottom, said sidewalls, and said first lining layer.

11. (Original) A double bottom apparatus as set forth in Claim 10 wherein said fluid tight containment space is purged of oxygen.

12. (Original) A double bottom apparatus as set forth in Claim 11 wherein said lining layer is fastened to said metal bottom by a plurality of fasteners.

13. (Original) A double bottom apparatus for a storage tank as set forth in Claim 1 including a sealant between said first lining and said sidewalls.

14. (Withdrawn) A method of installing a spacerless double bottom for a storage tank having a metal bottom and upwardly extending sidewalls, which method comprises the steps of:

installing a first lining layer of flexible plastic on top of said metal bottom;

installing a plastic grid having a plurality of openings therethrough on top of said lining layer;

installing at least one layer of fiber insulation on top of said grid; and

installing a new upper metal bottom above said natural fiber material.

15. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 14 including the additional step of affixing said lining layer to said metal bottom.

16. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 14 wherein said step of installing at least one layer of fiber insulation includes installing two layers of said fiber insulation.

17. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 14 wherein said step of installing a new upper metal bottom includes the steps of cutting a plurality of openings through said sidewalls, inserting a plurality of flat plates in said tank and through said sidewalls, and welding said flat plates to said sidewalls.

18. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 17 wherein all welding is performed from above said flat plates.

19. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 14 wherein said flat plates are welded to flat bars previously welded and extending from said sidewalls.

20. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 14 wherein said lining layer, said sidewalls and said upper bottom form a fluid-tight secondary container and including the additional step of purging said container of oxygen.

21. (Withdrawn) A method of installing a spacerless double bottom apparatus as set forth in Claim 14 including the additional step of installing a leak detection port through said sidewalls.

22. (New) A spacerless or geocomposite double bottom apparatus for a storage tank having a metal bottom and upwardly extending metal sidewalls, which apparatus comprises:

a first lining layer of flexible plastic on top of said metal bottom;

a plastic grid having a plurality of openings therethrough on top of said first lining layer;

at least one layer of fiber insulation on top of said grid; and

an upper metal bottom on top of said fiber material extending through slots in said sidewalls and welded thereto by welding to a flat bar extending from said sidewalls.